

Name: **Dr. Charles Mwaniki, Ph.D**

Sex: **Male**

Nationality: **Kenyan**



Contact Address (optional entries)

- P.O. Box: 552-01000 Thika, KENYA
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Languages spoken and Ability (optional)

- English
- Kiswahili

University Education Information

- **Bachelor of Science** in Electrical & Electronic Engineering, 1994 – 1999, **University of Nairobi, Nairobi, Kenya**
- **Master of Science in** Electrical & Electronic Engineering, Specialized in Electrical Power Systems, 2009 – 2012, **University of Nairobi, Nairobi, Kenya**
- **Doctor of Philosophy in** Electrical Engineering, Specialized in Electrical Power Systems, 2013 – 2017, **Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya**

Professional Certifications

Postgraduate Diploma in Education, Kenyatta University. Nairobi, Kenya

Graduate Engineer (R.GEng.), Engineers Registration Board of Kenya (EBK), Nairobi, Kenya

Graduate Member, Institution of Engineers of Kenya (IEK), Nairobi, Kenya

Papers Published In Peer-Refereed Journals

- 2009 – 2012:** “The Impact of Power Transformer Parameters on Voltage Collapse in a High Voltage A.C Network”. M.Sc. Thesis, Department of Electrical & Electronic Engineering. University of Nairobi, Nairobi, Kenya, 2012
- April 2012:** Voltage Stability Improvement using the 21st century Power Transformer, *Innovative Systems Design and Engineering Journal*, Vol. 3, No 4, 2012, Pg.21-28

- Sep 2013:** Nature Inspired Metaheuristic Optimization: A new approach to load shedding, 2013 KSEEE-JSAEM International Engineering conference, DeKUT, Nyeri, Kenya. September 2013, Pg. 145-150
- May 2014:** The Dependency of Bus Voltage and Frequency in Load Shedding, 2014 International Annual Conference on Sustainable Research and Innovation (SRI), JKUAT, Juja, Kenya. May 2014, Pg. 31-35
- May 2015:** Simultaneous Consideration of Bus Voltage and Frequency in Load Shedding in a High Voltage AC Network, 2015 International Annual Conference on Sustainable Research and Innovation (SRI), Kenya School of Monetary Studies, Nairobi, Kenya. May 2015, Pg. 30-34
- July 2015:** Optimal Under-voltage Load Shedding using Cuckoo Search with Levy Flight Algorithm for Voltage Stability Improvement, *International Journal of Engineering Science Invention (IJESI)*, Volume 4, Issue 7, July 2015, Pg. 34-41
- October 2015** Optimal Under-frequency Load Shedding using Cuckoo Search with Levy Flight Algorithm for Frequency Stability Improvement, *International Journal of Emerging Technology and Advanced Engineering (IJETAE)*, Volume 5, Issue 10, October 2015, Pg. 8-14
- Dec. 2015** Amalgamated Optimal Load Shedding using Cuckoo Search with Levy Flight Algorithm for Frequency and Voltage Stability Improvement, *International Journal of Emerging Technology and Advanced Engineering (IJETAE)*, Volume 5, Issue 12, December 2015, Pg. 9-15
- 2013 – 2017:** “Optimal Load shedding Algorithm based on Cuckoo Search with Levy Flight”. Ph.D. Thesis, Department of Electrical & Electronic Engineering. Jomo Kenyatta University of Agriculture & Technology, Nairobi, Kenya, 2017
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Employment Responsibilities – Former and current (optional)

Nov 2014 – To date: Full Time Lecturer, Machakos University . Teaching Electrical Power Systems and Electrical Machines

2010-2014: Part-time Lecturer, Technical University of Kenya. Teaching Electrical Power Systems, Control systems & Electrical Principles.

2011-2014: Part-time Lecturer, Dedan Kimathi University of Technology. Teaching Microprocessors systems, Digital Systems Design, Electrical Machines, Power Electronics and Electric Circuit Theory.

Have been rated very highly (above 82% overall) after regular appraisal exercises done during the last three semesters.

2011- 2014: Part-time Lecturer, Kenya Power Training school.

Have produced excellent results (98% pass) in Microcontroller and Microprocessor systems in the National Technical Examinations

2003 – 2014: Lecturer, Thika Technical Training Institute. Teaching Microprocessor Systems, Control Systems, Have produced excellent results (100% pass) in Control systems and Microprocessor systems in the National Technical Examinations